

Reg. No.: .....

**First Year B.Sc Optometry Degree Regular/Supplementary Examinations**  
**January 2022**  
**Paper II – Physiology**  
**(2016 Scheme)**

**Time: 3 hrs**

**Max marks: 80**

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers • Draw table/diagrams/flow charts wherever necessary
- Write section A and section B in separate answer books. Do not mix up questions from section A and section B.

**Q P Code: 123013**

**Section A – General Physiology**

**Marks: 40**

**Essay:**

**(10)**

1. Name the layers of the adrenal cortex and mention the hormones secreted by them.

Describe the features of Cushing's syndrome.

**(3+7)**

**Short notes:**

**(3x5=15)**

2. List the clotting factors and describe any one pathway of coagulation
3. Explain the chemical regulation of respiration
4. Cardiac output and its factors

**Answer briefly:**

**(5x2=10)**

5. Mismatched blood transfusion
6. Clinical features of diabetes mellitus
7. Functions of saliva
8. Types of circulatory shock
9. Blood pressure and its normal value.

**One-word answer:**

**(5x1=5)**

10. Excessive urination due to deficiency of antidiuretic hormone is called as .....
11. Normal value of WBC count is .....
12. The two types of nerve fibres which carry pain sensation are .....and .....
13. The name of the otolith organs located in the inner ear which sense the linear acceleration are .....and .....
14. Normal GFR value is .....

**Q P Code: 124013**

**Section B – Ocular Physiology**

**Marks: 40**

**Essay:**

**(10)**

1. List the theories of color vision and describe any one theory in detail. Add a note on color blindness.

**(2+5+3)**

**Short notes:**

**(3x5=15)**

2. Discuss the dynamics of circulation of the aqueous humor in the eye.
3. Explain the mechanism of accommodation in the eye
4. What is field of vision and how is it mapped

**Answer briefly:**

**(5x2=10)**

5. Purkinje images
6. Light adaptation
7. Snellen's chart
8. Layers of retina
9. Applanation tonometry

**One-word answer:**

**(5x1=5)**

10. Decreased permeability through the trabeculae results in .....
11. Varied curvature in different meridians of the cornea is a refractive error called as .....
12. Lesion in the optic chiasma results in a visual field defect called .....
13. Primary visual cortex is located in the .....
14. .... muscle causing pupillary constriction is supplied by the III cranial nerve

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